



Spectral Gamma-Ray Borehole
Log Data Report

Page 1 of 2

Borehole

41-09-03

Log Event A

Borehole Information

Farm : <u>SX</u>	Tank : <u>SX-109</u>	Site Number : <u>299-W23-104</u>
N-Coord : <u>35,356</u>	W-Coord : <u>75,812</u>	TOC Elevation : <u>661.80</u>
Water Level, ft :	Date Drilled : <u>3/19/1962</u>	

Casing Record

Type : <u>Steel-welded</u>	Thickness : <u>0.280</u>	ID, in. : <u>6</u>
Top Depth, ft. : <u>0</u>	Bottom Depth, ft. : <u>75</u>	

Equipment Information

Logging System : <u>2</u>	Detector Type : <u>HPGe</u>	Detector Efficiency: <u>35.0 %</u>
Calibration Date : <u>03/1995</u>	Calibration Reference : <u>GJPO-HAN-1</u>	

Logging Information

Log Run Number : <u>1</u>	Log Run Date : <u>6/23/1995</u>	Logging Engineer: <u>Dave Traub</u>
Start Depth, ft.: <u>0.0</u>	Counting Time, sec.: <u>100</u>	L/R : <u>L</u> Shield : <u>N</u>
Finish Depth, ft. : <u>58.5</u>	MSA Interval, ft. : <u>0.5</u>	Log Speed, ft/min.: <u>n/a</u>

Log Run Number : <u>2</u>	Log Run Date : <u>6/23/1995</u>	Logging Engineer: <u>Bob Spatz</u>
Start Depth, ft.: <u>73.5</u>	Counting Time, sec.: <u>100</u>	L/R : <u>L</u> Shield : <u>N</u>
Finish Depth, ft. : <u>72.0</u>	MSA Interval, ft. : <u>0.5</u>	Log Speed, ft/min.: <u>n/a</u>

Borehole

41-09-03**Log Event A**

Analysis Information

Analyst : P.D. HenwoodData Processing Reference : Data Analysis Manual Ver. 1Analysis Date : 10/17/1995**Analysis Notes :**

The drilling log for borehole 41-09-03 indicates the borehole was not perforated, cemented, or modified significantly.

Log Plot Notes:

Three log plots are provided. The Cs-137 concentrations are provided in a separate log plot to document the relative concentrations and shape of the distribution. A plot of naturally occurring radionuclides (K-40, U-238, and Th-232) is also provided, which can be used for lithology interpretation. A combination plot includes logs of Cs-137, natural gamma, total gamma derived from the spectral data, and the latest available data from the WHC Tank Farms gross gamma logging. The energy peaks from which the radionuclide concentrations were derived are included in the headings for the Cs-137 and natural gamma plots.

Log scales were selected for Cs-137, total gamma, and gross gamma logs in order to show the high intensity peak. The natural gamma logs are plotted on a linear scale.

The statistical uncertainty in a measurement is represented by uncertainty bars on the log plots where appropriate. This uncertainty is reported at the 95-percent confidence interval. The minimum detectable activity (MDA) is represented as an open circle on the plots. The MDA of a radionuclide represents the lowest concentration at which positive identification of a gamma-ray peak is statistically defensible. If the reported concentration is slightly above the MDA, the 95-percent confidence interval may extend below the MDA value and detection is not assured with 95-percent certainty.

The Tank Farms gross gamma plot is the latest available from WHC. No attempt has been made to adjust for depth discrepancies or other potential problems, with the exception of scale changes. The upper sections of log data above 62 ft for this borehole were not recorded by the WHC logging tool, which uses the more sensitive NaI crystal. Data collected from the less sensitive Geiger-Mueller probe were used to plot the elevated gamma zone where the SGLS encountered high dead time.